

## Aaron Olson ICS-690 Whitepaper (What I did this semester)

### Background

Fall 2022 semester. I came into the class with an understanding of what cryptocurrencies are and the basics of handling crypto currency (what wallets are + how to transfer currency between wallets).

Things I hadn't done that I was interested in doing

- Writing smart contracts
- Connecting FE code to interact with a deployed smart contract

The first thing I did was I started working to complete all the crypto zombies tutorials. I also wrote up a starter roadmap (week 1 + 2)

- I usually learn best by just jumping in and trying to write code, so this tutorial was very helpful to me
- roadmap doc - <https://docs.google.com/document/d/1apC-OZgySCYH0mrGYXIR-3xMg8Yq05G-mcuplHNcXY0/edit#>

Tried setting up a full node on testnet in the hopes of mining Ropsten testnet ETH (week 1 + 2)

- Instructions are all over the place, logs are very terse, was never successful
- Ended up discovering a link to a reliable rinkeby faucet hosted by chainlink foundation, scrapped the testnet node idea
  - <https://faucets.chain.link/rinkeby>

Researched existing projects I found the project to fork for our chit fund app (module 1) (week 2)

- <https://github.com/samarth30/chitFund>
  - which I forked into our org - <https://github.com/Maghribi-Foundation/chitFund>

I went through learning the processes of how to run and deploy it (week 3 + 4)

- Installing all dependencies ( had to make some adjustments as the original was out of date )
- Wrote doc for how to do setup as well as deployment  
[https://docs.google.com/document/d/1KeUPTJ1ru8D4QrViq8YQnTJ\\_YPET4CyrLJRk2qyPNtc/edit#heading=h.thneqtx0m17r](https://docs.google.com/document/d/1KeUPTJ1ru8D4QrViq8YQnTJ_YPET4CyrLJRk2qyPNtc/edit#heading=h.thneqtx0m17r)
- Gave presentation on my deployment and testing workflow

- made first PR to account for needed adjustments to dependencies and allow for deployment on Rinkeby <https://github.com/Maghribi-Foundation/chitFund/pull/1>

Spent time fixing the code, both FE and backend, to work with our rules (week 5 -6)

- Associated PR - <https://github.com/Maghribi-Foundation/chitFund/pull/3>
  - fix bug in contribution checks
  - change bidding logic
  - update logic for releasing funds
  - update variables for fund and investor objects
  - allow UI to track investor state
  - update UI functionality and to track fund state in more detail

Spent time over spring break working on writing the first version of the capitalization smart contract (week 7-8)

- Creates insurance pool
  - Creates underwriters
  - Mints new rep tokens
- Associated PR - <https://github.com/Maghribi-Foundation/chitFund/pull/5>

Updated capitalization contract for logic and bug fixes (week 9 - 10)

- Made module 3 and 4 breakdown doc  
<https://docs.google.com/document/d/1yU15hHZ43xxy03IN-x-xmb830NTe17Ky53G9kycn40g/edit>
- Made flow diagrams for the chit fund and capitalization contracts  
<https://app.diagrams.net/#G1PE4WZ1BfhP0phHlvVn1UTXHvARiv5bse>
- Made an entity responsibility diagram for the contracts for chit fund, capitalization, and the DAO [https://app.diagrams.net/#G1TwXzyZECjTxBb-hajh24IAQO6D3h\\_tE-](https://app.diagrams.net/#G1TwXzyZECjTxBb-hajh24IAQO6D3h_tE-)
- Updated the logic in the capitalization contract
  - Implemented several bug fixes
  - Cleaned up multiple namespace issues between the capitalization and chit fund contracts
  - Associated PR - <https://github.com/Maghribi-Foundation/chitFund/pull/9>

Work on white paper (week 11)

- made new updated roadmap ( at end of roadmap and agenda doc) -  
<https://docs.google.com/document/d/1apC-OZgySCYH0mrGYXIR-3xMg8Yq05G-mcuplHNcXY0/edit#>

Other miscellaneous things I have been doing

I have also been keeping the class agenda notes doc up to date

<https://docs.google.com/document/d/1apC-OZgySCYH0mrGYXIR-3xMg8Yq05G-mcuplHNcXY0/edit#>